

PATENT
Atty. Dkt. No. ACAD/0002
Serial No.: 10/612,594

REMARKS

This is intended as a full and complete response to the Restriction Requirement dated February 1, 2006, having a shortened statutory period for response set to expire on March 1, 2006. Please reconsider the claims pending in the application for reasons discussed below.

Claims 1-45 remain pending in the application and are shown above. Claims 1-45 are subject to restriction and election requirement. Applicant elects Group I, claims 1-5 and 20-22 with traverse. Claims 23-45 are cancelled without prejudice. Applicant reserves the right to pursue the cancelled claims at a later date. Reconsideration of the Restriction Requirement is requested for reasons presented below.

The Examiner states that Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claim 1-5 and 20-22, drawn to a nucleic acid encoding a BMP4 gene and a cell comprising said DNA molecule, classified in class 530, subclass 23.1; class 435, subclass 325.
- II. Claims 6-19, drawn to a transgenic embryo or fish comprising a nucleic acid encoding a BMP4 gene, classified in class 800, subclass 20.
- III. Claims 23, 26, 27, 30, 31 and 35, drawn to an *in vitro* method of screening for compounds that regulate BMP-4 expression by administering a compound to isolated cells comprising a BMP-4 expression vector, classified in class 435, subclass 4.
- IV. Claims 23-26 and 28-36, drawn to an *in vivo* method of screening for compounds that regulate BMP-4 expression by administering a compound to cells in an embryo comprising a BMP-4 expression vector, classified in class 800, subclass 3.
- V. Claims 37 and 39, drawn to an *in vitro* method of screening for effectors that regulate BMP-4 expression comprising introducing foreign cDNA into cells *in vitro* that contain a recombinant expression vector encoding a BMP-4 regulatory region, classified in class 435, subclass 6.

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- VI. Claims 37-39, drawn to an *in vivo* method of screening for effectors that regulate BMP-4 expression comprising introducing foreign cDNA into cells of an embryo that contain a recombinant expression vector encoding a BMP-4 regulatory region, classified in class 514, subclass 44; class 800, subclass 3.
- VII. Claims 40, 41 and 44, drawn to a method of identifying an expression pattern of a BMP-4 sequence using a cell *in vitro* comprising a BMP-4 expression sequence operatively linked to a reporter gene, classified in class 435, subclass 6.
- VIII. Claims 40-43 and 45, drawn to a method of identifying an expression pattern of a BMP-4 sequence using an embryo or fish *in vivo* comprising a BMP-4 expression sequence operatively linked to a reporter gene, classified in class 800, subclass 3.

Applicant respectfully traverses this restriction requirement. Applicant submits that some claims are included in two or more Groups and, thus, making the two or more Groups not distinct. For example, both Group III and Group IV include claims 23, 26, 30, 31 and 35 such that Group III and Group IV are not distinct. In addition, claims 37 and 39 are included in both Group V and Group VI such that Group V and Group VI are not distinct. Further, claims 40 and 41 are included in both Group VII and Group VIII such that Group VII and Group VIII are not distinct.

Accordingly, Applicant respectfully requests withdrawal of the restriction requirement and/or re-grouping of the claims.

The Examiner states that Inventions I and II are patentably distinct because Invention I is drawn to a nucleic acid encoding BMP-4 or its regulatory region whereas Invention II is drawn to a transgenic embryo or fish, *in vivo*, that comprises the nucleic acid and the inventions have different structures and have different modes of use. The Examiner further states that the nucleic acid can be used as a probe or to make protein *in vitro* while the embryo or fish can be used to screen compounds for *in vivo* BMP-4 modulators, and the nucleic acid, the embryos and fish are classified differently such that it would require undue burden to search Inventions I and II together.

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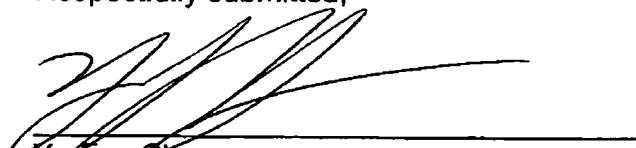
Applicant respectfully traverses this restriction requirement. Applicant submits that elected claim of Group I is drawn to a subcombination of the elements of claims 6-19 of Group II since claims 6-19 include all elements of claim 1. In addition, since claims 6-19 of Group II recite the isolated DNA molecule of claim 1, claims 6-19 of Group II and claims 1-5 and 20-22 of Group I refer to the same subject matter of the isolated DNA molecule of claim 1, for example, all of the claims 6-19 of Group II recite the isolated DNA molecule of claim 1, including a nucleic acid sequence selected from the group consisting of SEQ. ID NO. 1, SEQ. ID NO. 4, SEQ. ID NO. 7, SEQ ID No. 8, SEQ ID No. 9 and derivatives and fragments thereof.

Therefore, Group I and Group II are not distinct. Accordingly, withdrawal of the restriction requirement is respectfully requested.

Applicant has cancelled claims 23-45 without prejudice and reserves the right to pursue the subject matter of the cancelled claims and/or a possible rejoinder to the elected claim at a later date. Accordingly, withdrawal of the restriction requirement and prosecution of claims 1-22 are respectfully requested.

Having addressed all issues set out in the Restriction Requirement, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



Ya-Fen Chen
Registration No. 51,553
PATTERSON & SHERIDAN, L.L.P.
3040 Post Oak Blvd., Suite 1500
Houston, TX 77056
Telephone: (713) 623-4844
Facsimile: (713) 623-4846
Agent for Applicant(s)